

**Article 11. Surface Impoundments****§66265.220. Applicability.**

The regulations in this article apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as section 66265.1 provides otherwise.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 265.220.

**HISTORY**

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

**§66265.221. Design Requirements.**

(a) The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992 shall install two or more liners and a leachate collection and removal system between such liners, and operate the leachate collection and removal system, in accordance with section 66264.221(c), unless exempted under section 66264.221(f) or (g) of this chapter. The requirements of this subsection shall not apply to surface impoundment units receiving only non-RCRA hazardous waste until February 18, 1996. "Construction commences" is as defined in section 66260.10 of this chapter under "existing facility."

(b) The owner or operator of each unit referred to in subsection (a) of this section shall notify the Department at least sixty (60) days prior to receiving waste. The owner or operator of each facility submitting notice shall file a Part B application within six months of the receipt of such notice.

(c) The owner or operator of any replacement surface impoundment unit is exempt from subsection (a) of this section if:

(1) The existing unit was constructed in compliance with the design standards of sections 42 USC section 6924(o)(1)(A)(i) and 42 USC section 6924(o)(5); and

(2) There is evidence to believe that the liner is functioning as designed.

(d) The double liner requirement set forth in subsection (a) of this section may be waived by the Department for any monofill, if:

(1) the monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than exceeding the soluble threshold limit concentration as described in section 66261.24; and

(2)(A) 1. the monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this paragraph the term "liner" means a liner designed, constructed, installed and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, groundwater or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of subsection (a) of this section on the basis of a liner designed, constructed, installed and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment must comply with appropriate postclosure requirements, including but not limited to ground-water monitoring and corrective action;

2. the monofill is located more than one-quarter mile from an underground source of drinking water as defined in section 66260.10; and

3. the monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits; or

(B) the owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of subsection (a) of this section and in good faith compliance with subsection (a) of this section no liner or leachate collection system which is different from that which was so installed pursuant to subsection (a) of this section will be required for such unit by the Department when issuing the first permit to such facility, except that the Department will not be precluded from requiring installation of a new liner when the Department has reason to believe that any liner installed pursuant to the requirements of subsection (a) of this section is leaking.

(f) A surface impoundment shall maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm. Except as provided in subsection (b) of this section, there shall be at least 2 feet (60 cm) of freeboard.

(g) A freeboard level of less than 2 feet (60 cm) may be maintained if the owner or operator obtains certification by a qualified engineer, registered in California, that alternative design features or operating plans will, to the best of the engineer's knowledge and opinion, prevent overtopping of the dike. The certification along with a written identification of alternate design features or operating plans preventing overtopping, shall be maintained at the facility.

(h) Surface impoundments that are newly subject to RCRA section 3005(j)(1) (42 U.S.C. section 6925(j)(1)) due to the promulgation of additional listings or characteristics for the identification of hazardous waste shall be in

compliance with subsections (a), (c) and (d) of this section not later than 48 months after the promulgation of the additional listing or characteristic. This compliance period shall be consistent with health and safety code, division 20, article 9.5 and shall not be cut short as the result of the promulgation of land disposal prohibitions under Chapter 18 or the granting of an extension to the effective date of a prohibition pursuant to section 66268.5, within this 48-month period.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25159, 25159.5 and 25208.5, Health and Safety Code; and 40 CFR Section 265.221.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Amendment of section heading and subsections (a) and (c), new subsections (c)(1)-(2), (f), and (g), and amendment of Note filed 7-19-95; operative 8-18-95 (Register 95, No. 29).
3. Amendment of section heading, repealer of subsections (f) and (g), new subsection (h) and amendment of NOTE filed 1-31-96; operative 1-31-96 (Register 96, No. 5).
4. Change without regulatory effect amending subsections (a) and (c)(1) and adopting new subsections (f) and (g) filed 6-30-97 pursuant to section 100, title 1, California Code of Regulations (Register 97, No. 27).
5. Change without regulatory effect amending subsection (h) filed 8-15-97 pursuant to section 100, title 1, California Code of Regulations (Register 97, No. 43).
6. Change without regulatory effect amending subsection (a) filed 10-21-97 pursuant to section 100, title 1, California Code of Regulations (Register 97, No. 43).

#### **§66265.222. Action Leakage Rate.**

(a) The owner or operator of surface impoundment units subject to section 66265.221(a) shall submit a proposed action leakage rate to the Department when submitting the notice required under section 66265.221(b). The Department will establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section.

(b) The Department shall approve an action leakage rate for surface impoundment units subject to section 66265.221(a). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid pressure head on the bottom liner exceeding 1 foot (30.5 cm) at any given portion of the liner. The action leakage rate shall include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate shall consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(c) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under section 66265.226(b), to an average daily flow rate (gallons per acre per day) for each sump. Unless the Department approves a different calculation, the average daily flow rate for each sump shall be calculated weekly during the active life and closure period, and if the unit closes in accordance with section 66265.228(a)(2), monthly during the post-closure care period when monthly monitoring is required under section 66265.226(b).

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code; and Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.222.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Repealer and new section filed 7-19-95; operative 8-18-95 (Register 95, No. 29).
3. Change without regulatory effect amending subsection (b) filed 6-30-97 pursuant to section 100, title 1, California Code of Regulations (Register 97, No. 27).
4. Change without regulatory effect amending Note filed 6—7—2004 pursuant to section 100, title 1, California Code of Regulations (Register 2004, No.24).

#### **§66265.223. Containment System.**

All earthen dikes shall have a protective cover, such as grass, shale, or rock to minimize wind and water erosion and to preserve their structural integrity.

NOTE: Authority cited: Sections 25150, 25159, 58004 and 58012, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.223.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Renumbering and amendment of former section 66265.223 to new section 66265.224 filed 7-19-95; operative 8-18-95 (Register 95, No. 29).
3. New section and amendment of NOTE filed 10-13-98; operative 11-12-98 (Register 98, No. 42).

#### **§66265.224. Response Actions.**

(a) The owner or operator of surface impoundment units subject to section 66265.221(a) shall submit a response action plan to the Department when submitting the proposed action leakage rate under section 66265.222.

The response action plan shall set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan shall describe the actions specified in subsection (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator shall:

- (1) Notify the Department in writing of the exceedence within 7 days of the determination;
- (2) Submit a preliminary written assessment to the Department within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
- (3) Determine to the extent practicable the location, size, and cause of any leak;
- (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
- (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
- (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Department the results of the analyses specified in subsections (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator shall submit to the Department a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in subsections (b)(3), (4), and (5) of this section, the owner or operator shall:

- (1)(A) Assess the source of liquids and amounts of liquids by source,
- (B) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible locations of any leaks, and the hazard and mobility of the liquid; and
- (C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
- (2) Document why such assessments are not needed.

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code; and Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.224.

#### HISTORY

1. Renumbering of former section 66265.223 to new section 66265.224, repealer and new section filed 7-19-95; operative 8-18-95 (Register 95, No. 29).

#### **§66265.225. Waste Analysis and Trial Tests.**

(a) In addition to the waste analyses required by section 66265.13, whenever a surface impoundment is to be used to:

(1) chemically treat a hazardous waste which is substantially different from waste previously treated in that impoundment; or

(2) chemically treat hazardous waste with a substantially different process than any previously used in that impoundment; the owner or operator shall, before treating the different waste or using the different process:

- (A) conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests); or
- (B) obtain written, documented information on similar treatment of similar waste under similar operating conditions; to show that this treatment will comply with section 66265.17(b).

(b) As required by section 66265.13, the waste analysis plan shall include analyses needed to comply with sections 66265.229 and 66265.230. As required by section 66265.73, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 265.225.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

#### **§66265.226. Monitoring and Inspection.**

(a) The owner or operator shall inspect:

- (1) the freeboard level at least once each operating day to ensure compliance with section 66265.222, and
- (2) the surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration, or failures in the impoundment.

(b)(1) An owner or operator required to have a leak detection system under section 66265.221(a) shall record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump shall be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps shall be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps shall be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Department based on pump activation level, sump dimensions, and level that avoids backup into drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed "pump operating level" will be in accordance with section 66265.222(a).

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code; and Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.226.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Amendment of section heading, new subsections (b)(1)-(3) and amendment of Note filed 7-19-95; operative 8-18-95 (Register 95, No. 29).

#### **§66265.228. Closure and Postclosure Care.**

- (a) At closure, the owner or operator shall:
  - (1) remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless section 66261.3(d) applies; or
  - (2) close the impoundment and provide postclosure care for a landfill under article 7 and section 66265.310 of this chapter, including the following:
    - (A) eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;
    - (B) stabilize remaining wastes to a bearing capacity sufficient to support the final cover; and
    - (C) cover the surface impoundment with a final cover designed and constructed to:
      1. minimize the downward entry of water into the closed impoundment throughout a period of at least 100 years;
      2. function with minimum maintenance;
      3. promote drainage and minimize erosion or abrasion of the cover;
      4. accommodate settling and subsidence so that the cover's integrity is maintained;
      5. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present;
      6. accommodate lateral and vertical shear forces generated by the maximum credible earthquake so that the integrity of the cover is maintained;
      7. preclude ponding of rainfall and surface run-on over the closed area; and
      8. conform to the provisions of subsection (e) through (r) of section 66264.228, except that the Department shall grant a variance from any requirement which the owner or operator demonstrates to the satisfaction of the Department is not necessary to protect public health, water quality or other environmental quality.
- (b) In addition to the requirements of article 7 and section 66265.310 of this chapter, during the postclosure care period, the owner or operator of a surface impoundment in which wastes, waste residues or contaminated materials remain after closure in accordance with the provisions of subsection (a)(2) of this section shall:
  - (1) maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion or other events;
  - (2) maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of article 6 of chapter 14;
  - (3) prevent run-on and run-off from eroding or otherwise damaging the final cover, and
  - (4) maintain and monitor the leak detection system in accordance with sections 66265.221(c)(2)(D) and (c)(3) of this chapter and 66265.226(b) and comply with all other applicable and leak detection system requirements of this part.

NOTE: Authority cited: Sections 25150 and 25159, Health and Safety Code; and Governor's Reorganization Plan Number 1 of 1991. Reference: Sections 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.228.

#### HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).
2. Amendment of subsections (b)(2)-(3), new subsection (b)(4) and amendment of Note filed 7-19-95; operative 8-18-95 (Register 95, No. 29).
3. Change without regulatory effect amending subsection (b)(4) filed 6-30-97 pursuant to section 100, title 1, California Code of Regulations (Register 97, No. 27).

#### **§66265.229. Special Requirements for Ignitable or Reactive Waste.**

Ignitable or reactive waste shall not be placed in a surface impoundment unless the waste and the impoundment satisfy all applicable requirements of chapter 18 of this division, and:

- (a) the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:
  - (1) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under sections 66261.21 or 66261.23 of this chapter; and
  - (2) section 66265.17(b) is complied with; or
- (b)(1) the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; and

(2) the owner or operator obtains a certification from a qualified chemist or engineer, registered in California that to the best of the chemist's or engineer's knowledge and opinion, the design features or operating plans of the facility will prevent ignition or reaction; and

(3) the certification and the basis for it are maintained at the facility; or

(c) the surface impoundment is used solely for emergencies.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 265.229.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

**§66265.230. Special Requirements for Incompatible Wastes.**

Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) shall not be placed in the same surface impoundment, unless section 66265.17(b) is complied with.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; 40 CFR Section 265.230.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

**§ 66265.231. Air Emission Standards.**

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of articles 28 and 28.5 of this chapter.

NOTE: Authority cited: Sections 25150, 25159, 25159.5, 25245 and 58102, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 265.231.

HISTORY

1. Change without regulatory effect adding new section filed 6-11-99 pursuant to Health and Safety Code section 25159.1 (Register 99, No. 24).